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Original Article

Neonatal jaundice and birth asphyxia as major causes of cerebral palsy in Nigeria: are doctors' wrong beliefs and practices part of the problem?

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ABSTRACT

Background: Cerebral Palsy is permanent sequela of severe non-progressive insult to the immature brain of children. In Nigeria, kernicterus from neonatal jaundice and hypoxic ischaemic encephalopathy form severe birth asphyxia have been identified as among the leading causes of this scourge. Poor management of these causative conditions by doctors possibly by imbibing wrong beliefs and practices may be a major contributor to continuation of the scourge of cerebral palsy. **Aim:** The objective of this study is to determine if doctors practicing in Delta state of Nigeria are part of the wrong beliefs and practices that militate against effective management of the two prominent causes of cerebral palsy in Nigeria. **Methods:** A survey of 116 doctors randomly selected from 600 doctors in both public and private health institutions in Delta state of Nigeria was done by means of a structured questionnaire. **Results:** The result of the survey showed that 75% of the doctors have wrong beliefs and practices regarding the management of neonatal jaundice while 89.7% have similar wrong beliefs and practices with respect to the management of birth asphyxia. **Conclusion:** Medical practitioners should be re-educated possibly through the continuing medical education (CME) which is a pre-requisite to renewing the practicing license while long term measures require strengthening medical school teaching and learning modules to emphasize key points in the undergraduate medical training programs.

Key words: Neonatal jaundice, birth asphyxia, cerebral palsy, health institutions, practice, CME

INTRODUCTION

Cerebral palsy (CP) is a disorder of posture and movement due to a defect or disease of the brain, appearing in the early years of life.[1] The disease is not progressive although the manifestations may alter.[1] Severe birth asphyxia (SBA) with hypoxic ischaemic encephalopathy (HIE) are major

causes of CP in Nigeria.[2] In a certain study in Nigeria on cerebral palsy, Birth asphyxia was the leading cause (45.7%) followed by neonatal jaundice (12.6%).[3]

According to WHO, between four and nine million newborn develop birth asphyxia each year; of these, an estimated 1.2 million die and at least the same number develop severe consequences such as epilepsy, cerebral palsy and developmental delay.[4,5] In Nigeria,birth asphyxia is a major cause of neonatal morbidity and mortality. In a certain study in Benin City in Nigeria birth asphyxia occurred in 83.8 per 1000 lives birth.[6] In another centre in Nigeria, the incidence was 45/1000 lives births.[7] In Sokoto in Nigeria the birth asphyxia incidence was 26.5 per 1000 live births with 12 per 1000 live birth being severe birth asphyxia.[8]

Neonatal jaundice account for 35% of all NICU admission in Abakaliki, southeast Nigeria.[9] While in Ife, southwest Nigeria, neonatal jaundice accounted for 45% of admission to neonatal intensive care unit (NICU).[10]

There are many superstitious and wrong beliefs and practices[11] about these two conditions. The belief is rife in public domain that early morning sunlight to which the baby is exposed alone is sufficient to treat neonatal jaundice. Others believe that administration of glucose and ampiclox (amoxycilin + cloxacilin) is an effective treatment of neonatal jaundice. For babies who suffer from severe birth asphyxia, it is commonly observed practice rather than embark on standard resuscitative measures including AMBU bagging and possible intubation with intermittent positive pressure ventilation (IPPV), such babies are often inappropriately turned upside down and violently stimulated in the hope that this would force them to resume spontaneous breathing. Others would simply administer adrenalin and hydrocortisone while yet others will just administer oxygen by face mask to the non-breathing baby hoping to get the baby to resume spontaneous breathing.[12] These practices waste valuable time while complication of the SBA orchestrate.

The purpose of this study is to determine if doctors have also imbibed these superstitious, wrong beliefs and practices and if so, what proportion of them had these wrong beliefs and practices.

METHODOLOGY

A survey of 116 doctors randomly selected in Delta State from 600 doctors in both private and public health sectors was done. A questionnaire was administered that enquired of sex of respondents, medical qualification(s) and number of years of medical practice and means by which doctors have used to treat jaundice in their practice and how they would manage a baby with birth asphyxia.

RESULT

Table 1: Sex Distribution of respondents (doctors surveyed in the study)

Sex	No. of Doctors	%
Male	90	77.6%
Female	26	22.4%

Table 2: Years of practice as a doctor

Years	No. of Doctors	%
<5 years	21	18.1%
5 – 10 years	20	17.2%
10 – 20 years	27	23.3%
>20	48	41.4%

Table 3: Professional qualifications of respondents

Qualifications	No. of Doctors	%
MBBS(Bachelor of Medicine, Bachelor of Surgery).	61	52.6%
Post Graduate Fellowship(Specialist doctors excluding paediatricians)	27	23.3%
Others e.g MPH,(Masters in PubliHealt),MSc(Masters in Science)	28	24.1%

Table 4: How do you treat neonatal jaundice (NNJ)?

Treatment of NNJ (136 Responses)		No. of Doctors	%
A.	Exposure to early morning sun	51	37.5%
B.	Oral glucose + Ampiclox	11	8.1%
C.	A + B above	40	29.4%
D.	None of the above	34	25%

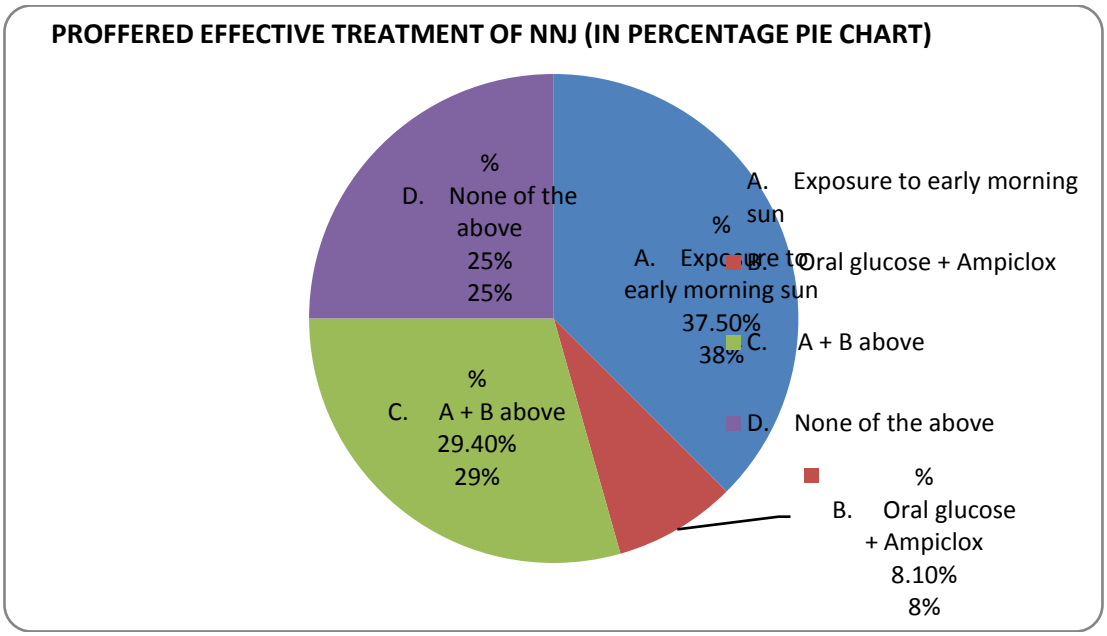

Figure 1: Proffered effective treatment of neonatal jaundice

20 (17.2%) responded yes to all A, B & C hence the multiple responses (136) making the total number of responses to exceed 116.

There were 135 responses to the question of how to handle severe birth asphyxia as shown below in the table.

Table 5: What to do immediately after birth for SBA baby (Resuscitation)

		No. of Doctors	%
A.	Turn baby upside down	42	31.1%
B.	Give Adrenalin/Hydrocortisone injection	17	12.6%
C.	Give O_2 by face mask to stimulate breathing	48	35.6%
D.	None of the above is effective	28	20.7%

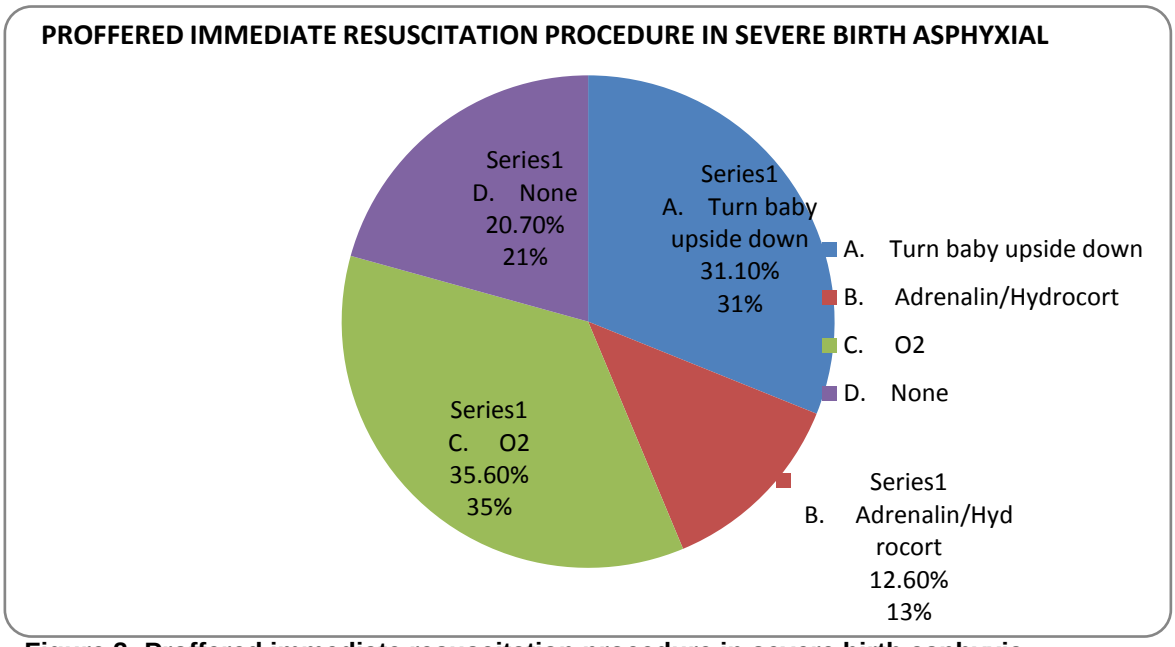

Figure 2: Proffered immediate resuscitation procedure in severe birth asphyxia

25 (16.3%) doctors believed in a combination of the procedures stated above making the total responses (135) exceeding the total number of the doctors sampled.

DISCUSSION

This study revealed that 75% of doctors have adopted the wrong and ineffective methods of treatment of neonatal jaundice. This implies that there is great danger to babies in the state who suffer from this potentially dangerous condition, that may require continuous phototherapy or exchange blood transfusion to prevent kernicterus and subsequent cerebral palsy. These wrong practices inadvertently learn credibility to the relatively poorly trained proprietors of maternity homes and traditional birth attendants (TBA) who are emboldened to reinforce these dangerous practices for neonatal jaundice.

The same applies to the management of severe birth asphyxia where an even larger proportion of doctors (79.3%) supported ineffective methods in handling SBA. This brings to the fore the role of doctors in contributing to the scourge of cerebral palsy through wrong beliefs and practices in these two crucial medical conditions where time is of great essence with respect to development of permanent complications, ultimately leading to cerebral palsy.

CONCLUSION

Having established the culpability of doctors in their role in promoting beliefs and practices that may potentially lead to a continuous harvest of preventable cerebral palsies in the general population which they serve, the short term immediate measure is to properly re-educate medical practitioners through the now compulsory annual continuing medical education (CME) which is a pre-requisite for renewing the practicing license while long term measures requires strengthening medical school teaching and learning modules to emphasize key points in the undergraduate medical training programs.

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Conflict of Interest: None declared